

WHAT IS CLAIMED IS:

1 1. A power control apparatus comprising:

2 a power control section for controlling amplitude by  
3 correcting a symbol point arrangement of data on the basis  
4 of a correction amplitude value inputted from the external  
5 and for outputting data to be transmitted, produced by the  
6 amplitude control; and

7 a power correcting section for correcting an  
8 amplitude value of a symbol before phase rotation on the  
9 basis of a decision signal representative of need/non-need  
10 for correction of the symbol amplitude value before the  
11 phase rotation and a mask signal indicative of at least  
12 one of symbol point components being masked and for  
13 inputting the corrected amplitude value to said power  
14 control section.

1 2. A power control apparatus according to claim 1,  
2 wherein at least one of said power control section and  
3 said power correcting section receive data modulated  
4 through the use of a nine-point constellation forming said  
5 symbol point arrangement.

1 3. A power control apparatus according to claim 2,  
2 wherein said power correcting section is made to output  
3 the corrected amplitude value in units of 45 degree for

4 each symbol.

1 4. A power control apparatus according to claim 1,  
2 wherein said power correcting section includes:

3 a mask signal correcting section for correcting power  
4 control information about transmission on the basis of  
5 said mask signal to output the corrected power control  
6 information; and

7 a phase rotation correcting section for correcting  
8 the corrected power control information outputted from  
9 said mask signal correcting section on the basis of said  
10 decision signal and for inputting the corrected amplitude  
11 value to said power control section.

1 5. A power control apparatus according to claim 4,  
2 wherein said mask signal correcting section includes:

3 an arithmetic section for performing predetermined  
4 arithmetic processing on said power control information to  
5 output the arithmetically processed power control  
6 information; and

7 a selecting section for outputting, as the corrected  
8 amplitude value, desired one of said power control  
9 information and the arithmetically processed power control  
10 information outputted from said arithmetic section.

1 6. A power control apparatus according to claim 5,  
2 wherein said phase rotation correcting section includes:

an arithmetic section for performing predetermined arithmetic processing on the corrected power control information to output the arithmetically processed corrected power control information; and  
a selecting section for outputting, as the corrected amplitude value, desired one of the corrected power control information and the arithmetically processed corrected power control information outputted from said arithmetic section on the basis of said decision signal and said mask signal.

7. A power control apparatus according to claim 2, wherein said power correcting section includes:

an arithmetic section for performing predetermined arithmetic processing on said power control information to output the arithmetically processed power control information; and

a selecting section for outputting, as the corrected amplitude value, desired one of said power control information and the arithmetically processed power control information outputted from said arithmetic section on the basis of said decision signal and said mask signal.

8. A power control apparatus according to claim 5, wherein said arithmetic section is designed to output, as the arithmetically processed power control information, subtracted power control information obtained by

5 subtracting a predetermined value from said power control  
6 information.

1 9. A power control apparatus according to claim 5,  
2 wherein said arithmetic section is made to output, as the  
3 arithmetically processed power control information, added  
4 power control information obtained by adding a  
5 predetermined value to said power control information.

1 10. A power control apparatus according to claim 5,  
2 further comprising a symbol arrangement information  
3 arithmetic section for outputting symbol arrangement  
4 information based on logic of said mask signal to said  
5 selecting section.

1 11. A power control apparatus according to claim 1,  
2 further comprising a transmission symbol power adjusting  
3 section for adjusting transmission symbol power on the  
4 basis of the corrected amplitude value outputted from said  
5 power correcting section.

1 12. A power control apparatus comprising:  
2 a power control section for conducting amplitude  
3 adjustment by adjusting s symbol point arrangement of data  
4 on the basis of an adjustment amplitude value inputted  
5 from the external and for outputting data to be  
6 transmitted, produced by the amplitude adjustment; and

a power adjusting section for adjusting an amplitude value of a symbol before phase shift on the basis of a decision signal representative of need/non-need for adjustment of the symbol amplitude value before the phase shift and a mask signal representative of a phase shifted position resulting from a symbol point component and for inputting the adjusted amplitude value to said power control section.

13. A power control method comprising:

a phase rotating step of phase-rotating data arranged at a symbol point through the use of a desired modulation method to output data to be transmitted;

a mask signal outputting step of outputting a mask signal representative of which at least one of symbol point components being masked;

an arithmetically processed power control information generating step of conducting predetermined arithmetic processing on power control information about transmission to generate corrected power control information;

selecting/outputting step of selectively outputting desired one of said power control information and the corrected power control information generated in said arithmetically processed power control information generating step on the basis of said mask signal outputted in said mask signal outputting step and a decision signal representative of need/non-need for correction of an

amplitude value of a symbol before phase rotation; and  
an amplitude controlling step of controlling an  
amplitude of data to be transmitted, outputted in said  
phase rotating step, on the basis of said power control  
information or the corrected power control information  
selectively outputted in said selecting/outputting step.

14. A power control method according to claim 13, wherein  
said phase rotating step is made to use a nine-point  
constellation as the symbol point arrangement.

15. A power control method comprising:  
a phase rotating step of phase-rotating data arranged  
at a symbol point through the use of a desired modulation  
method to output data to be transmitted;  
a corrected power control information outputting step  
in which a power correcting section having a desired  
correction quantity for each of said symbol points  
corrects power control information on the basis of a  
decision signal representative of need/non-need of an  
amplitude value of said symbol before phase rotation to  
output the corrected power control information; and  
an amplitude controlling step of controlling an  
amplitude of data to be transmitted, outputted in said  
phase rotating step on the basis of the corrected power  
control information outputted in said corrected power  
control information outputting step.

1 16. A power control method comprising:  
2 a constellation correcting step of correcting data  
3 placed at each of symbol points through a desired  
4 modulation method on the basis of a mask signal  
5 representative of at least one of symbol point components  
6 being masked, for outputting the corrected data; and  
7 a phase rotation correcting step of correcting the  
8 corrected data obtained in said constellation correcting  
9 step on the basis of a decision signal representative of  
10 need/non-need of an amplitude of said symbol before phase  
11 rotation for outputting total corrected data.